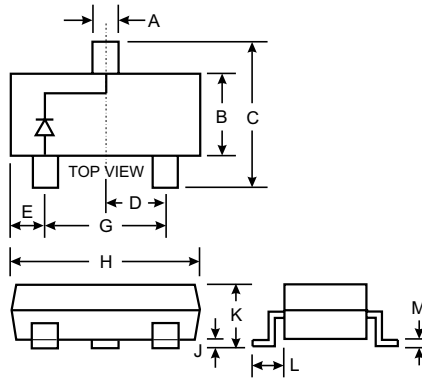


**Features**

- Very Low Forward Voltage Drop
- High Conductance
- For Use in DC-DC Converter, PCMCIA, and Mobile Telecommunications Applications

**Mechanical Data**

- Case: SOT-23, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.008 grams (approx.)
- Marking: K77 and Date Code



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.19	1.40
C	2.10	2.50
D	0.89	1.05
E	0.45	0.61
G	1.78	2.05
H	2.65	3.05
J	0.013	0.15
K	0.89	1.10
L	0.45	0.61
M	0.076	0.178
All Dimensions in mm		

**Maximum Ratings @ T<sub>A</sub> = 25°C unless otherwise specified**

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	40	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	28	V
Average Rectified Current (Note 1)	I <sub>O</sub>	0.75	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	5.5	A
Power Dissipation (Note 1)	P <sub>d</sub>	350	mW
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	R <sub>θJA</sub>	286	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-40 to +125	°C

**Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified**

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V <sub>(BR)R</sub>	40	45	—	V	I <sub>R</sub> = 300uA
Forward Voltage (Note 2)	V <sub>F</sub>	—	225 235 290 340 390 420 475	280 310 350 420 490 540 650	mV	I <sub>F</sub> = 50mA I <sub>F</sub> = 100mA I <sub>F</sub> = 250mA I <sub>F</sub> = 500mA I <sub>F</sub> = 750mA I <sub>F</sub> = 1000mA I <sub>F</sub> = 1500mA
Maximum Reverse Current (Note 2)	I <sub>R</sub>	—	50	100	μA	V <sub>R</sub> = 30V
Junction Capacitance	C <sub>j</sub>	—	175 25	—	pF pF	V <sub>R</sub> = 0V, f = 1.0MHz V <sub>R</sub> = 25V, f = 1.0MHz

- Notes: 1. Valid Provided that terminals are kept at ambient temperature.  
2. t<sub>p</sub> < 300μs, duty cycle < 2%

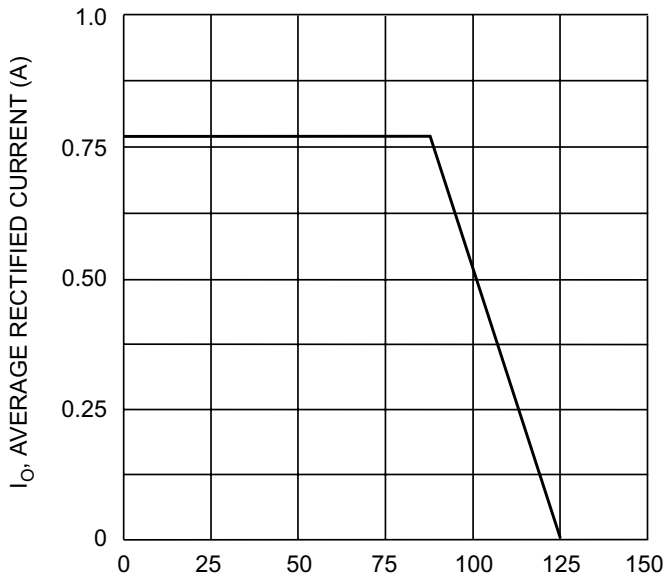


Fig. 1 Forward Current Derating Curve

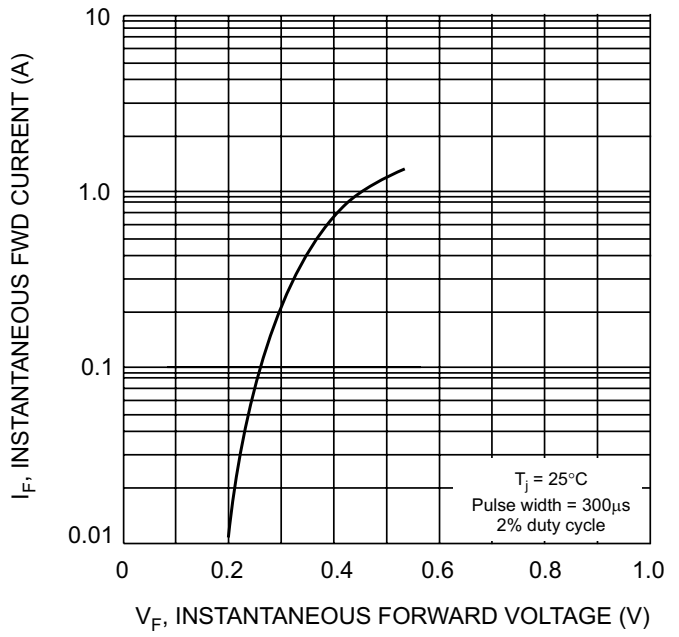


Fig. 2 Typical Forward Characteristics

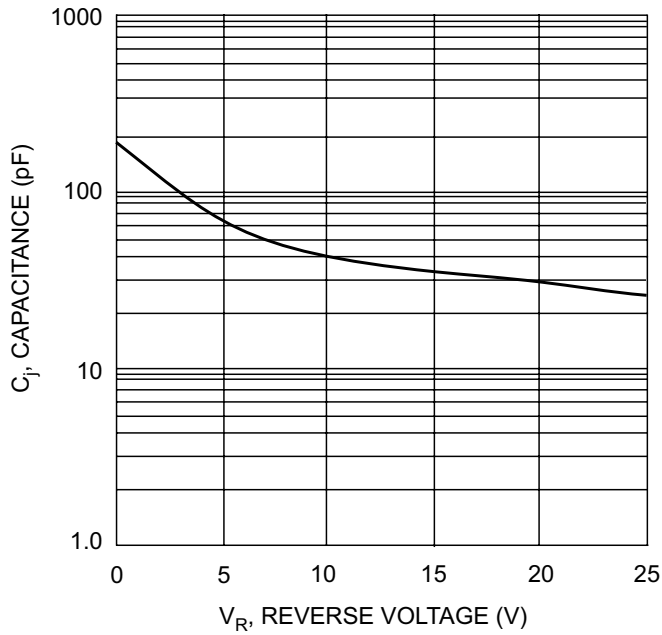


Fig. 3 Typ. Junction Capacitance vs Reverse Voltage

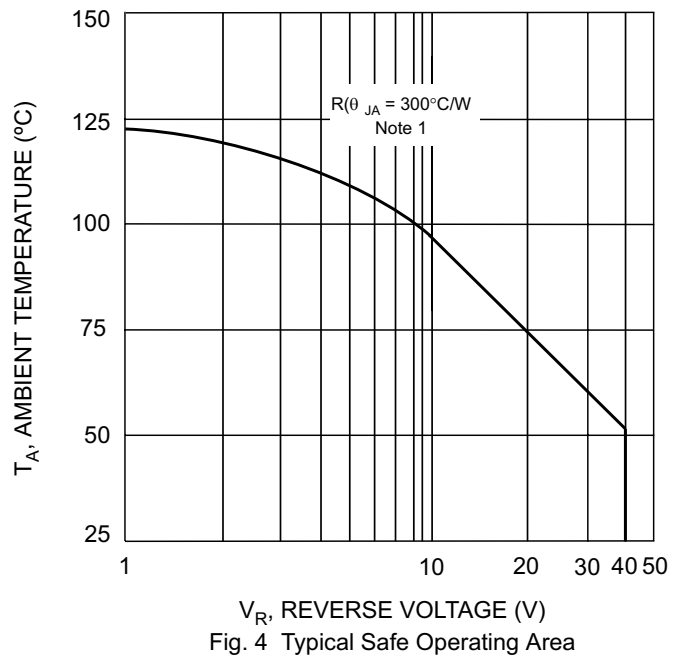


Fig. 4 Typical Safe Operating Area

Note: 1. Assumed application thermal conditions.  
 $R\theta_{JA}$  varies depending on application.